

Challenge

Issue

The degraded water quality affected the operation of the boiler water system.

Goal

Provide a long-term, permeation resistant coating eliminating water contamination.

Root Cause

Coating permeation resulted in corrosion of substrate. Original tank coating failed in < 10 years. Resulting corrosion contaminating water with adverse impact to boiler.



Outside view of one of the tanks

Solution

Preparation

- Grit blast remove old coating
- Replace structurally impaired, corroded steel plates
- Grit blast to Sa 2.5 with 3 mil (75 µm) angular profile

Application

1. Spray apply first coat of **ARC S1PW**
2. Stripe coat weld seams with **ARC S1PW**
3. Spray apply second coat of **ARC S1PW**
4. Achieve DFT of 25 mils (650 µm)



Stripe coating of the weld seams between the first and second coat of ARC S1PW

Results

Service Life After ARC Coatings

- 10+ years without blistering, cracking, or delamination
- No maintenance required since coating

Additional Benefits

- Demineralized water quality now continuously meets power plant's specification requirements

Client Follow Up

- Subsequent to initial success, 10 more demin water tanks to be protected with **ARC S1PW**



View of the completed application